

Stream and River Restoration With Emphasis on Fish Habitat Improvement

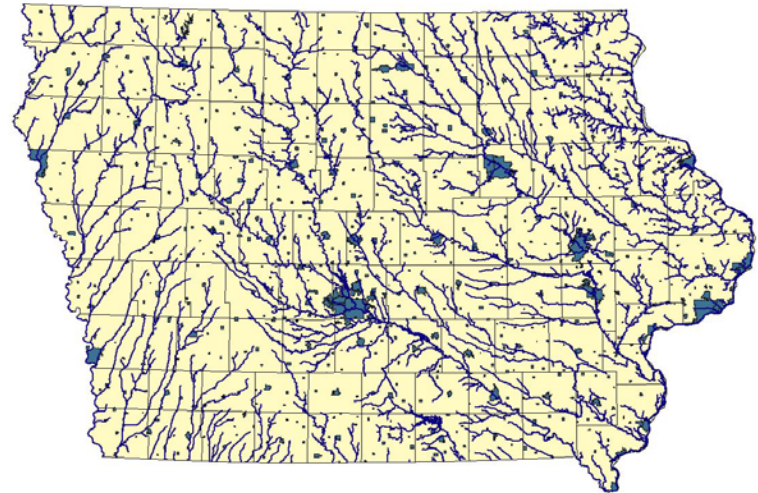


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Why Stream and River Restoration??

- Diverse and dynamic part of the landscape.
- Environmental Benefits.
- Effects those Downstream.
- There's one in Everybody's Backyard!





Why Stream and River Restoration??

- Water Quality
 - Reduction in nutrients, sediment and other impairments
 - Clean drinking water
-  Habitat - A place to live
-  Healthy Aquatic Communities
- Economic development
 - Fishing/hunting/bird watching/canoe/kayaking
 - floating/playing/boating/swimming/hiking
- Everybody benefits!



Stream and River Restoration:

- Has all the Right Ingredients

- Watershed Work
- Floodplain Connectivity
- Riparian/Grassed Corridor Management
- Streambank Stabilization
- Instream Habitat
- Dam Removal/Modification

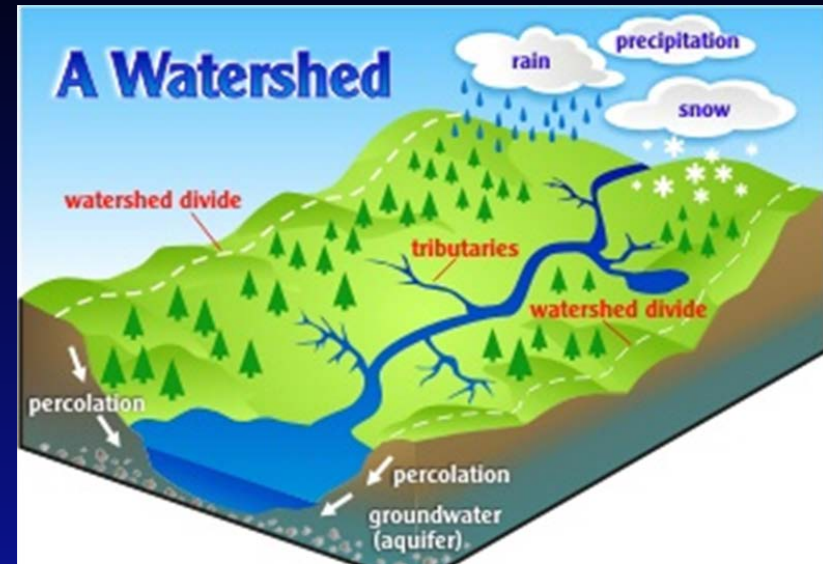


★ Each one works independent of each other, but longevity/success is dependant upon each other



Components of Quality Streams in Iowa

- Floodplain connection (stream not incised)
- Longitudinal connection (free-flowing)
- Compatible watershed use
- Diversity of substrates
- Diversity of water depths
- Sinuosity (not straightened)
- Intact riparian corridor
- Relatively predictable base flow
- Compatible near-stream land-cover



Factors That Affect Stream Quality

1) Factors Beyond the Landowner's Control

- Soil Types
- Topography and Gradient
- Climate
- Geology



2) Factors Within the Landowner's Control

- Land-use
- Stream Bank Vegetation Type and Density
- Riparian Corridor Vegetation Type and Density
- Point and Non-Point Inputs of Nutrients
- Channel Modifications and Channel Changes













Benefits to Iowans:

- Improved Water Quality.
 - Reduced Nutrients & Sediment

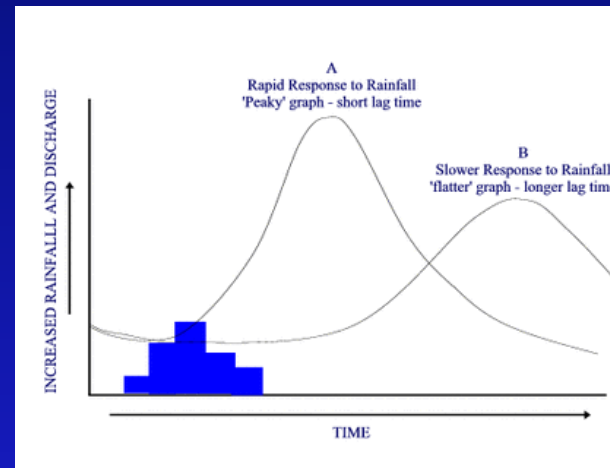
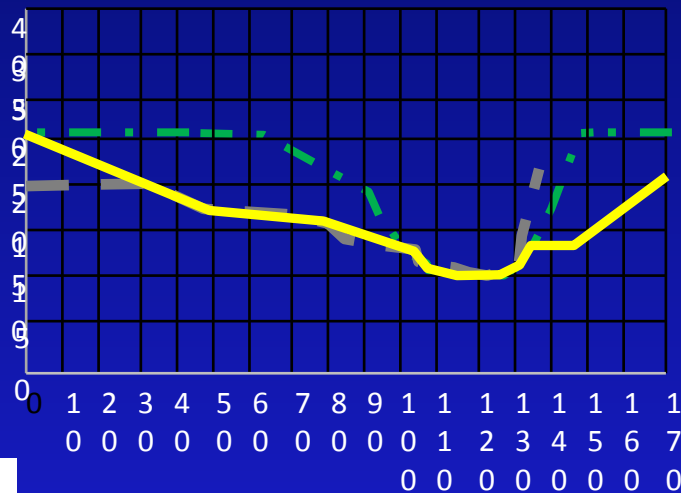


- Improved Habitat.
 - Clean Substrate for Inverts & Spawning
 - Cover for Feeding & Protection



Benefits to Iowans:

- Reduced Flooding Impacts
 - Dissipates the Water's Energy
 - Flattens out the Peaks
 - Reduces Erosion & Property Damage



Benefits to Iowans:

- Better Fishing Through Cooperation
 - Natural Reproduction
 - More Fish Available
 - Optimized Stocking



Benefits to Iowans:

- Increased Use
- Economic Development- Trout Anglers

- **Swiss Valley Creek (aka Catfish Creek, Dubuque Co):**

- **2006: Ranked 21st**

- 10,288 trips x \$46.50/trip = \$478,392

- **2011: Ranked 4th**

- 21,212 trips x \$46.50/trip = \$986,358

- **Statewide (streams and urban ponds)**

- 582,851 trips x \$46.50/trip = \$27,102,572

- **Other Uses (ISU CARD Survey):**

- Fishing/hunting/bird watching/canoe/kayaking
 - floating/playing/boating/swimming/hiking



Questions??

